

REMARKS

This is a response to the Office Action mailed April 20, 2005. The Office Action objected to claim 20, rejected claims 28-30 under 35 U.S.C. §112, rejected claims 15, 17-19, 20, 24, 28, 29, 31, and 32 under 35 U.S.C. §102, and rejected claims 23 and 30 under 35 U.S.C. §103(a), and noted the allowability of claims 1-6, 8, 9, 11, 16, 21, 22, and 27.

Claims 1, 5, 9, 15, 20, 21, 28, 29, and 30 have been amended. Claims 16-19, 22, 27, 31, and 32 have been cancelled. Claims 33-40 have been added. Claims 1-6, 8-9, 11-12, 15, 20, 21, 23, 24, 28-30, and 33-40 remain pending in this application.

Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Objections

The Office Action objected to claim 20 as informal due to a minor grammatical error. Applicants have amended claim 20 to correctly read “plurality of chip-scale”. Withdrawal of this objection is respectfully requested.

Rejections Under 35 U.S.C. § 112

The Office Action rejected claims 28-30 under 35 U.S.C. §112, ¶2, as being indefinite. Applicants have amended claims 28-30 to correct the problems noted in the Office Action. Applicants respectfully request that this rejection be withdrawn.

Rejections Under 35 U.S.C. § 102

The Office Action rejected claims 15, 17-19, 28, 29, 31, and 32 under 35 U.S.C. §102(b) as being anticipated by Kyoungoku et al. (U.S. Pat. No. 5,995,379) (“Kyoungoku”).

While Applicants disagree that Kyougoku teaches the invention as claimed, Applicants have amended independent claim 15 to include the allowable limitation of “the substrate having a coefficient of expansion that substantially matches a coefficient of expansion of the semiconductor device to within six parts per million per degree Celsius or less.” As a result of this amendment, Applicants submit that independent claim 15 and dependent claims 28, and 29 are in condition of allowance.

The Office Action also rejected claims 20 and 24 under 35 U.S.C. §102(b) as being anticipated by Moden et al. (U.S. Pat. No. 6,297,960) (“Moden”).

While Applicants disagree that Moden teaches the invention as claimed, this argument need not be reached since Applicants have amended independent claim 20 to include the allowable limitation of claim 21. As a result of its dependence on claim 20, claim 24 is also in condition of allowance.

Rejections Under 35 U.S.C. § 103

The Office Action rejected claim 23 under 35 U.S.C. §103(a) as being unpatentable over Moden in view of Yew et al. (U.S. Pat. No. 6,137,164) (“Yew”).

While Applicants disagree that Moden in view of Yew teach the invention as claimed, this argument need not be reached since Applicants have amended independent claim 20 to include the allowable limitation of claim 21. As a result of its dependence on claim 20, claim 23 is also in condition of allowance.

The Office Action rejected claim 30 under 35 U.S.C. §103 (a) as being unpatentable over Kyougoku in view of Nishimura et al. (U.S. Pat. No. 6,781,241) (“Nishimura”).

While Applicants disagree that Kyougoku in view of Nishimura teach the invention as claimed, this argument need not be reached since Applicants have amended independent claim 15 to include the allowable subject matter of claim 16. As a result of its dependence on claim 15, claim 30 is also in condition of allowance.

Allowable Subject Matter

The Office Action noted claims 1-6, 8, 9, 11, 12, 16, 21, 22, and 27 claimed allowable subject matter. Applicants have placed these claims in condition of allowance and respectfully request that this application be issued.

Newly Added Claims

To more clearly claim that which Applicants consider their invention, claims 33-40 have been newly added. Independent claim 35 includes the allowed subject matter of “the substrate having a coefficient of expansion that substantially matches a coefficient of expansion of the semiconductor device to within six parts per million per degree Celsius or less.” Independent claims 37 and 39 also include the allowed subject matter of “a semiconductor device mounted on the first surface of the substrate using a plurality of electrical conductors, the semiconductor device having a first surface and an opposite second surface, the first surface of the semiconductor device mounted facing the first surface of the substrate, wherein the first surface of the memory device remains partially exposed for improved heat dissipation.”

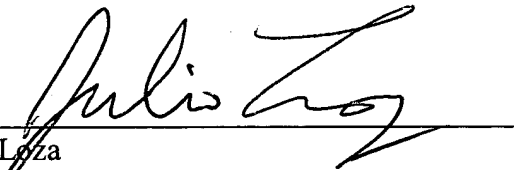
Applicants concur with the Examiner’s observation in the Office Action of April 20, 2005, that neither of these limitations is found in the cited prior art.

CONCLUSION

In view of the amendments and remarks made above, it is respectfully submitted that the pending claims are in condition for allowance, and such action is respectfully solicited. Authorization is hereby given to charge our Deposit Account No. 19-2090 for any charges that may be due. Furthermore, if an extension is required, then Applicants hereby request such an extension.

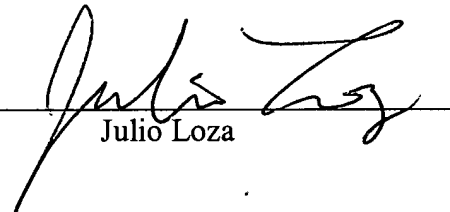
Respectfully submitted,

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I hereby certify that this document is being deposited on May 13, 2005 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313

By:


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Dated: May 13, 2005